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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,052	11/20/2003	Paul Michael Ferrell	28642/04198	9298

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EXAMINER	
CLARDY, S	

ART UNIT	PAPER NUMBER
1617	

DATE MAILED: 05/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/718,052	FERRELL, PAUL MICHAEL	
	Examiner	Art Unit	
	S. Mark Clardy	1617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 March 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claims 1-17 and new claims 18-23 are pending in this application.

Applicant's claims are drawn to a fertilizer product (claims 10-17, 21-23) comprising a particulate fertilizer substrate which is impregnated with an agrochemical (e.g., prodiamine, claim 16), which is dissolved in an organic liquid carrier (e.g., N-methyl pyrrolidone or NMP, or γ-butyrolactone, claims 13-44), which is present in the fertilizer substrate in an amount up to 10 wt%. Also claimed are methods of making the compositions (claims 1-9, 18-20).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-23 are again rejected under 35 U.S.C. 103(a) as being unpatentable over the combined teachings of and Zagar et al (US 2005/0037923; PCT filed Dec 18, 2002), Ross et al[1], and Weston et al (US 5,352,265).

Zagar et al, again, teach herbicidal compositions may be produced as various customary liquid or solid formulations (para 276) such as coated granules, impregnated granules, and homogeneous granules by binding the active compounds to solid carriers which may be, among other things, fertilizers such as urea (para 284). NMP is disclosed among the suitable liquid inert auxiliaries with a carrier function (para 280); in order to impregnate a granule, the active agent will necessarily be dissolved and/or suspended in such a carrier. Prodiamine is also disclosed (para 115) as being a possible secondary active agent for the composition.

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[1] Ross et al. *Applied Weed Science.* Chapter 6: "Herbicide Application". P. 107-110. 1985.

Ross et al, again, teach that granular herbicidal compositions comprising fertilizer materials such as urea are conventional in the art (p. 109), and that "impregnating dry bulk fertilizers with herbicides is done simply by using a rotary drum (or similar) mixer equipped with a spray nozzle ..." (p. 110).

Weston et al, again, teach a homogeneous granular urea-based fertilizer composition comprising urea and two other agents, NBPT[2] and DCD[3]. To make the granular product, the NBPT is dissolved in a solvent such as 2-pyrrolidone or NMP (Ex. 3) and then combined with molten urea prior to granulation. The DCD may either be dissolved along with the NBPT, or added directly into the melt (Abstract).

One of ordinary skill in the art would be motivated to combine these references in order to make the impregnated or homogeneous granular compositions of Zagar et al by the methods as disclosed in Weston et al or Ross et al.

Thus, again, it would have been *prima facie* obvious to the ordinary artisan at the time the invention was made to have made applicant's herbicidal (prodiamine) impregnated fertilizer granule because granule impregnation is a conventional process by which active agents are dissolved or suspended in a liquid carrier, such as NMP, and then applied to a granular material. The prior art teaches that urea is a useful particulate substrate for such compositions which may be made either by conventional impregnation, or by combining active agents with a solvent such as NMP which is then added to molten urea, with the subsequent material subsequently granulated. Thus, the fertilizer product as claimed herein may be made by the process as claimed, or by a process making use of a molten substrate.

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[2] N-(n-butyl)thiophosphoric triamide

Again, applicant has specified various parameter and concentration ranges. It is well-established that merely selecting proportions and ranges is not patentable absent a showing of criticality. In re Becket, 33 U.S.P.Q. 33 (C.C.P.A. 1937). In re Russell, 439 F.2d 1228, 169 U.S.P.Q. 426 (C.C.P.A. 1971).

It appears that applicant's invention pertains to improving the safety of making the claimed compositions (specification pages 1-2). If data can be provided that demonstrates the criticality of the previously discussed ranges with respect to flammability or other safety issues, or that demonstrates enhanced safety (reduced flammability) in comparison with conventional granule impregnation, then the claims would be allowable.

Absent such evidence, no unobvious or unexpected results are noted; no claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Mark Clardy whose telephone number is 571-272-0611. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sreenivasan Padmanabhan can be reached on 571-272-0629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

S. Mark Clardy
Primary Examiner
Art Unit 1617

May 9, 2006

[3] dicyandiamide